

ABSTRACT OF THE DISCLOSURE

The present invention discloses a method for manufacturing an MOS varactor which can be utilized as a high frequency device with an increased capacitance of the varactor part while maintaining the characteristics of a transistor by forming a gate oxide film of the MOS varactor by a high dielectric material as compared to a gate oxide film of the transistor. The method comprises the steps of: forming a device isolation film on a semiconductor substrate; depositing a gate oxide film and a first polysilicon after the formation of the device isolation film; patterning the resultant material and etching the first polysilicon and the gate oxide film to form a transistor gate; coating the resultant material with a photoresist film, then opening a varactor forming region and then forming a varactor oxide film of a high dielectric material; depositing the second polysilicon and then patterning the same to form a varactor gate; and removing the photoersist film of the transistor forming region and then proceeding to the following processes.